GenCore version 5.1.3

OM protein - protein search, using sw model

Run on: October 9, 2002, 15:47:34 ; Search time 59 Seconds
(without alignments)
1515.498 Million cell updates/sec

Title: US-09-635-501-2
Perfect score: 4291
Sequence: 1 MSSSSWLLLSLVAVTAAQST.....ISKGENNPGFQNTDDVQTSF 805

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 747574 seqs, 111073796 residues

Total number of hits satisfying chosen parameters: 747574

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_032802:*
1: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1980.DAT:*
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22: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	4291	100.0	805	21	AAY84562	A human angiotensi
2	4291	100.0	805	21	AAY67310	Human MPROT15 amin
3	4291	100.0	805	22	AAY72667	Human angiotensin
4	4291	100.0	805	22	AAB48095	Human Zace2 protei
5	3775	88.0	711	22	AAU09092	Novel human protei
6	3579	83.4	805	22	AAB48097	Mouse Zace2-5 prot
7	3561	83.0	805	22	AAB48098	Mouse Zace2-10 pro
8	2979	69.4	555	22	AAU12207	Human PRO1885 poly
9	2539	59.2	480	21	AAY67311	Human MPROT15 amin
10	1359	31.7	261	22	AAU09102	Novel human protei
11	1344	31.3	732	12	AAR10426	Human testicular a
12	1337	31.2	1306	11	AAR04111	Human angiotensin
13	1336	31.1	1306	19	AAW68155	Human angiotensin
14	1334	31.1	1249	22	AAU02957	Angiotensin conver
15	1334	31.1	1252	22	AAU02985	Angiotensin conver
16	1086	25.3	615	22	ABB64006	Drosophila melanog
17	1057	24.6	660	16	AAR70013	Tick carboxypeptid
18	1028	24.0	630	22	ABB65165	Drosophila melanog
19	990	23.1	694	21	AAY93619	Amino acid sequenc
20	990	23.1	694	22	AAU08701	Human zinc metallo
21	841	19.6	792	22	ABB71128	Drosophila melanog
22	735	17.1	235	22	AAU25463	Human mddt protein
23	715.5	16.7	465	22	AAG67296	Amino acid sequenc
24	502.5	11.7	661	22	ABB59152	Drosophila melanog
25	476	11.1	611	22	ABB70388	Drosophila melanog
26	409.5	9.5	628	22	ABB59496	Drosophila melanog
27	387	9.0	222	22	AAB88580	Human hydrophobic
28	384	8.9	222	19	AAW29670	Homo sapiens clone
29	383	8.9	222	20	AAY04174	Human 5' EST secre
30	381	8.9	222	20	AAY59653	Secreted protein e
31	381	8.9	222	20	AAY25459	Human secreted pro
32	381	8.9	222	20	AAY35890	Extended human sec
33	381	8.9	222	20	AAW93620	Human 5' EST secre
34	381	8.9	222	20	AAY12680	Human 5' EST secre
35	381	8.9	222	20	AAY12986	Human secreted pro
36	381	8.9	222	20	AAY01594	Secreted protein e
37	381	8.9	222	20	AAY04156	Human 5' EST secre
38	381	8.9	222	21	AAG00014	Human secreted pro
39	380	8.9	223	21	AAY76135	Human secreted pro
40	376	8.8	184	22	AAM23565	Human EST encoded
41	376	8.8	212	21	AAB33447	Human PRO1312 prot
42	376	8.8	212	21	AAB24430	Human PRO1312 prot
43	376	8.8	212	21	AAY66751	Membrane-bound pro
44	376	8.8	212	22	AAU12412	Human PRO1312 poly
45	376	8.8	212	22	AAB65274	Human PRO1312 (UNQ

ALIGNMENTS

RESULT 1
AAY84562
ID AAY84562 standard; Protein; 805 AA.
XX
AC AAY84562;
XX
DT 25-JUL-2000 (first entry)
XX
DE A human angiotensin converting enzyme-2 (ACE-2) protein.
XX
KW Human; angiotensin converting enzyme-2; ACE-2; angiotensin I; Ang.(1-9);
KW blood pressure; hypertension; congestive heart failure; atherosclerosis;
KW chronic heart failure; acute heart failure; myocardial infarction;
KW renal failure.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1..18
FT /note= "signal sequence"
FT Domain 19..740
FT /note= "extracellular domain"
FT Domain 374..378
FT /note= "minimal zinc binding domain"
FT Domain 741..765
FT /note= "transmembrane domain"
FT Domain 766..805
FT /note= "cytoplasmic domain"
XX
PN WO200018899-A2.
XX
PD 06-APR-2000.
XX
PF 29-SEP-1999; 99WO-US22976.

XX
PR 30-SEP-1998; 98US-0163648.
XX
PA (MILL-) MILLENNIUM PHARM INC.
XX
PI Acton LS, Robison KE, Hsieh FY;
XX
DR WPI; 2000-293140/25.
DR N-PSDB; AAA12764.
XX
PT Isolated nucleic acid encoding angiotensin converting enzyme-2 (ACE-2)
PT polypeptide useful for detecting an ACE-2 therapeutic for treating
PT hypertension, congestive heart failure, myocardial infarction,
PT atherosclerosis and renal failure -
XX
PS Claim 2; Fig 1; 138pp; English.
XX
CC The present sequence represents a human angiotensin converting enzyme-2
CC (ACE-2). ACE-2 is expressed predominantly in kidneys and testis. The
CC sequence of the full length ACE-2 cDNA was determined from a clone
CC obtained from a cDNA library prepared from mRNA of a human heart of
CC a subject who had congestive heart failure. ACE-2 has significant
CC sequence homologies with ACE enzymes, and has also been shown to
CC hydrolyse angiotensin I into Ang.(1-9). The ACE-2 therapeutics are
CC used to treat blood pressure related diseases and conditions, such as
CC hypertension, congestive heart failure, chronic heart failure, acute
CC heart failure, myocardial infarction, atherosclerosis and renal
CC failure.
XX
SQ Sequence 805 AA;

Query Match 100.0%; Score 4291; DB 21; Length 805;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 805; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60
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Db      1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60

Qy     61 NMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTIL 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 NMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTIL 120

Qy    121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180

Qy    181 EEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHL 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 EEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHL 240

Qy    241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300

Qy    301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360

Qy    361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420

Qy    421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480

Qy    481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540

Qy    541 KCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy    601 NSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKN 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy    661 QMILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDN 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    661 QMILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDN 720

Qy    721 SLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKKKNKARSGENP 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    721 SLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKKKNKARSGENP 780

Qy    781 YASIDISKGENNPGFQNTDDVQTSF 805
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Db    781 YASIDISKGENNPGFQNTDDVQTSF 805
```

RESULT 2
AAY67310
ID AAY67310 standard; Protein; 805 AA.
XX
AC AAY67310;
XX
DT 11-APR-2000 (first entry)
XX
DE Human MPROT15 amino acid sequence #1.
XX
KW MPROT15; treatment; hypertension; human; myocardial disease; apoplexy;
KW heart disease; apoplexy; heart disease; nervous denaturation; hormone;
KW Alzheimer's disease; cytokine.
XX
OS Homo sapiens.
XX
PN JP11318472-A.
XX
PD 24-NOV-1999.
XX
PF 22-JAN-1999; 99JP-0014949.
XX
PR 13-MAY-1998; 98GB-0010373.
PR 18-AUG-1998; 98GB-0018009.
XX
PA (SMIK) SMITHKLINE BEECHAM PLC.
XX
DR WPI; 2000-109268/10.
DR N-PSDB; AAZ59465.
XX
PT MPROT15 polypeptide and MPROT15 polynucleotides - useful for the
PT treatment of hypertension, myocardial diseases, apoplexy, heart
PT diseases, nervous denaturation, Alzheimer's disease etc.
XX
PS Claim 1; Page 15; 22pp; Japanese.
XX
CC This is amino acid sequence #1 of human MPROT15. The MPROT15
CC polynucleotide and polypeptide sequences can be used for the treatment of
CC hypertension, myocardial diseases, apoplexy, heart diseases, nervous
CC denaturation, Alzheimer's disease and diseases related to the processing
CC of peptide hormones and cytokines.
XX
SQ Sequence 805 AA;

Query Match 100.0%; Score 4291; DB 21; Length 805;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 805; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60
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Db      1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60

Qy     61 NMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTIL 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```

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Db      61 NMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTIL 120

Qy     121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180
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Db     121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180

Qy     181 EEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHL 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 EEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHL 240

Qy     241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300

Qy     301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360
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Db     301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360

Qy     361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420

Qy     421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480
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Db     421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480

Qy     481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540
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Db     481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540

Qy     541 KCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK 600
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Qy     601 NSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKN 660
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Db     601 NSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKN 660

Qy     661 QMILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDN 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 QMILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDN 720

Qy     721 SLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKKKNKARSGENP 780
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Db     721 SLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKKKNKARSGENP 780

Qy     781 YASIDISKGENNPGFQNTDDVQTSF 805
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Db     781 YASIDISKGENNPGFQNTDDVQTSF 805
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```
RESULT 3
AAY72667
ID   AAY72667 standard; Protein; 805 AA.
XX
AC   AAY72667;
XX
DT   31-MAY-2001  (first entry)
XX
DE   Human angiotensin converting enzyme-2 (ACE-2).
XX
KW   Human; angiotensin converting enzyme-2; ACE-2; peptidyl dipeptidase A;
KW   screening; therapy; hypertension; congestive heart failure; CHF;
KW   inflammation; pain.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1..18
FT                   /label= Signal_peptide
FT   Protein         19..805
FT                   /label= Mature_ACE-2_protein
FT   Domain          374..378
FT                   /label= ZBD
FT                   /note= "Zinc binding domain"
FT   Domain          741..765
FT                   /label= TMD
FT                   /note= "Transmembrane domain; Hydrophobic region"
FT   Domain          766..805
FT                   /label= Cytoplasmic_domain
XX
PN   US6194556-B1.
XX
PD   27-FEB-2001.
XX
PF   11-DEC-1997;   97US-0989299.
XX
PR   11-DEC-1997;   97US-0989299.
XX
PA   (MILL-) MILLENNIUM PHARM INC.
XX
PI   Acton SL,  Robison KE;
XX
DR   WPI; 2001-210604/21.
DR   N-PSDB; AAD02758.
XX
PT   Novel genes encoding angiotensin converting enzyme-2 useful as
PT   antisense or antigene agents for therapeutics, diagnostics and
PT   screening assays -
XX
PS   Claim 33; Fig 1; 76pp; English.
XX
CC   The present amino acid sequence is human angiotensin converting enzyme-2
CC   (ACE-2), also referred as peptidyl dipeptidase A (EC 3.4.15.1). Nucleic
CC   acid sequence encoding ACE-2 is useful as antisense or antigene agents
CC   for sequence specific modulation of gene expression or in the analysis of
CC   single base-pair mutations in the gene. Nucleic acid sequence encoding
CC   ACE-2 is useful in therapeutics, diagnostics and in screening assays.
CC   ACE-2 antagonist is used to treat hypertension or congestive heart
CC   failure (CHF). ACE agonist is used to reduce the inflammation and pain
CC   resulting from an insect sting or bite, which was accompanied by an
CC   injection of bradykinin. Anti-ACE-2 antibodies are used to monitor ACE-2
CC   protein levels for determining the disease or condition associated with
CC   an aberrant protein level.
XX
SQ   Sequence   805 AA;
```

Query Match 100.0%; Score 4291; DB 22; Length 805;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 805; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy       1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60
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Db       1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60

Qy      61 NMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTIL 120
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Qy     121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180
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Db     121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180

Qy     181 EEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHL 240
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Qy     241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300
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Db     241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300

Qy     301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360

Qy     361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420
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Db     361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420

Qy     421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480

Qy     481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540

Qy     541 KCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK 600
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 KCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK 600

Qy     601 NSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKN 660
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 NSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKN 660

Qy     661 QMILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDN 720
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 QMILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDN 720

Qy     721 SLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKKKNKARSGENP 780
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 SLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKKKNKARSGENP 780

Qy     781 YASIDISKGENNPGFQNTDDVQTSF 805
                 |||||||||||||||||||||||||
Db     781 YASIDISKGENNPGFQNTDDVQTSF 805
```

RESULT 4
AAB48095
ID AAB48095 standard; Protein; 805 AA.
XX
AC AAB48095;
XX
DT 19-MAR-2001 (first entry)
XX
DE Human Zace2 protein.
XX
KW Zace2; metalloenzyme; angiotensin-converting enzyme; ACE; fertility;
KW zinc metallopeptidase; blood pressure; zinc protease; hypertension;
KW ventricular systolic dysfunction; renal impairment; heart failure;
KW scleroderma renal crisis; atherosclerosis;. antiinflammatory; human;
KW antiarthritic; bradykinin inactivator.
XX
OS Homo sapiens.
XX
PN WO200070032-A1.
XX
PD 23-NOV-2000.
XX
PF 03-MAY-2000; 2000WO-US11932.
XX
PR 13-MAY-1999; 99US-0311482.
PR 27-AUG-1999; 99US-0384706.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Piddington CS, Petrie CR, Shoemaker KE, Bishop PD;
XX
DR WPI; 2001-025018/03.
DR N-PSDB; AAC84366, AAC84367.
XX
PT Angiotensin-converting enzyme, Zace2, useful for treating inflammatory
PT bowel disease, e.g. Crohn's disease and ulcerative colitis, or diseases
PT associated with inflammation such as arthritis and enterocolitis -
XX
PS Example 1; Page 95-100; 125pp; English.
XX
CC The invention relates to the metalloenzyme Zace2. Zace2, an angiotensin-
CC converting enzyme is a zinc metallopeptidase that plays roles in blood
CC pressure regulation and fertility. Zace2 can be expressed by standard
CC recombinant methodology. Zace2 polypeptides are useful for treating an
CC inflammatory bowel disease (e.g. Crohn's disease and ulcerative colitis),
CC diseases associated with inflammation like arthritis and enterocolitis,
CC as targets for identifying modulators of zinc protease activity, for
CC screening or identifying new angiotensin-converting enzyme (ACE)
CC inhibitors, and as a basis for rational drug design for inhibitory
CC molecules. The nucleic acids can be used to detect the expression of a
CC Zace2 gene in a biological sample, as probes for in vivo diagnosis and
CC for detecting and localizing Zace2 gene expression in tissue samples,
CC to determine whether a subject's chromosomes contain a mutation in the
CC Zace2 gene, and to detect aberrations associated with the Zace2 locus.
CC Inhibitors of ACE are used for treating hypertension of various
CC conditions, including left ventricular systolic dysfunction, progressive
CC renal impairment, scleroderma renal crisis, congestive heart failure due
CC to dysfunction, and treatment of atherosclerosis. Zace2 agonists may be
CC used to treat infertility while Zace2 antagonists are used for inducing
CC infertility. The present sequence represents the human Zace2 protein.
XX
SQ Sequence 805 AA;

```
  Query Match             100.0%;  Score 4291;  DB 22;  Length 805;
  Best Local Similarity   100.0%;  Pred. No. 0;
  Matches  805;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60

Qy      61 NMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTIL 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 NMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTIL 120

Qy     121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180

Qy     181 EEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHL 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 EEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHL 240

Qy     241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300

Qy     301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360

Qy     361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420

Qy     421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480

Qy     481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540

Qy     541 KCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 KCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK 600

Qy     601 NSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKN 660
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 NSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKN 660

Qy     661 QMILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDN 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 QMILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDN 720
```

```
Qy    721 SLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKKKNKARSGENP 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    721 SLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKKKNKARSGENP 780

Qy    781 YASIDISKGENNPGFQNTDDVQTSF 805
          |||||||||||||||||||||||||
Db    781 YASIDISKGENNPGFQNTDDVQTSF 805


RESULT 5
AAU09092
ID   AAU09092 standard; Protein; 711 AA.
XX
AC   AAU09092;
XX
DT   20-DEC-2001  (first entry)
XX
DE   Novel human protein NHP #1.
XX
KW   Human; novel human protein; NHP; antidiabetic; antirheumatic;
KW   antiarthritic; cytostatic; antiarteriosclerotic; vulnerary;
KW   neuroprotective; nootropic; antiparkinsonian;
KW   anti-human immunodeficiency virus; antiasthmatic; vasotropic; cardiant;
KW   hypotensive; anorectic; antiinfertility; neuroleptic; anticonvulsant;
KW   antimanic; immunosuppressive; cerebroprotective; antimicrobial;
KW   antiinflammatory; antibacterial; antipsoriatic; thyromimetic;
KW   immunomodulator; antiseborrheic; dermatological; vasoconstriction;
KW   gastrointestinal disorder; cardiovascular disorder; hypertension;
KW   coronary heart disease; arteriosclerosis; anorexia; obesity; bulimia;
KW   cachexia; male infertility; impotence; testicular cancer; lung tumour;
KW   hyperproliferative disorder; pulmonary system disorder;
KW   central nervous system disorder; bone disorder;
KW   neurodegenerative disease; Alzheimer's disease; Parkinson's disease;
KW   Huntington's disease; schizophrenia; mania; dementia; paranoia;
KW   panic disorder; learning disability; amyotropic lateral sclerosis;
KW   psychosis; autism; sleep disorder; immune system disorder;
KW   Hashimoto's thyroiditis; musculo-skeletal system disorders;
KW   multiple sclerosis; ischaemic brain injury; stroke; infectious disease;
KW   diabetes mellitus; immunological disorder; asthma; AIDS; immunogen;
KW   acquired immunodeficient syndrome; leukaemia; rheumatoid arthritis;
KW   inflammatory bowel disease; sepsis; acne; psoriasis; lupus erythematosus;
KW   neural system disorder; respiratory disorder; olfactory disorder;
KW   wound healing; chromosome X.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          1..681
FT                   /label= Extracellular_domain
FT   Region          48..55
FT                   /label= Immunogenic_epitope
FT   Region          110..118
FT                   /label= Immunogenic_epitope
FT   Region          136..146
FT                   /label= Immunogenic_epitope
FT   Region          151..158
FT                   /label= Immunogenic_epitope
FT   Misc-difference 219
FT                   /label= OTHER
FT                   /note= "Other= Any amino acid encoded by WST"
FT   Misc-difference 240
FT                   /label= OTHER
FT                   /note= "Other= Any amino acid encoded by RCC"
FT   Misc-difference 499
FT                   /label= OTHER
FT                   /note= "Other= Any amino acid encoded by NTT"
FT   Domain          682..698
FT                   /label= Transmembrane_domain
XX
PN   WO200174896-A1.
XX
PD   11-OCT-2001.
XX
PF   02-APR-2001; 2001WO-US10542.
XX
PR   03-APR-2000; 2000US-194118P.
PR   29-SEP-2000; 2000US-236384P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Moore PA,  Ni J,  Soppet DR,  Coleman TA,  Gentz RL,  Endress GA;
PI   Li Y,  Dillon PJ;
XX
DR   WPI; 2001-626394/72.
DR   N-PSDB; AAS14880.
XX
PT   New human proteins, useful for diagnosing, treating, preventing and/or
PT   prognosing disorders related to the proteins, including cardiovascular
PT   disorders, autoimmune disorders and reproductive disorders -
XX
PS   Claim 11; Page 298-301; 318pp; English.
XX
CC   The invention relates to novel human proteins (NHP) and the
CC   nucleic acids that encode them and antibodies raised against them.
CC   The proteins, antibodies and nucleic acids are useful in the diagnosis,
CC   prognosis, prevention and/or treatment or diseases and/or disorders
CC   involving vasoconstriction, gastrointestinal disorders, cardiovascular
CC   disorders (e.g. hypertension, erectile dysfunction, high blood pressure,
CC   coronary heart disease and arteriosclerosis), anorexia, obesity, bulimia,
CC   cachexia, disorders of small intestine, disorders of reproductive system
CC   (e.g. male infertility and/or impotence), testicular cancer, lung tumours
CC   and other hyperproliferative disorders, disorders of pulmonary system,
CC   central nervous system disorders, bone disorders, neurodegenerative
CC   diseases and behavioural disorders (e.g. Alzheimer's disease, Parkinson's
CC   disease, Huntington's disease, schizophrenia, mania, dementia, paranoia,
CC   panic disorder, learning disabilities, amyotropic lateral sclerosis,
CC   psychoses, autism, sleep disorders), immune system disorders (e.g.
CC   Hashimoto's thyroiditis), renal and musculo-skeletal system disorders,
CC   central nervous system disorders (e.g. multiple sclerosis, ischaemic
CC   brain injury and/or stroke), infectious diseases, diabetes mellitus,
CC   immunological disorders (e.g. asthma, acquired immunodeficient syndrome
CC   (AIDS), leukaemia, rheumatoid arthritis, inflammatory bowel disease,
CC   sepsis, acne, psoriasis and lupus erythematosus), neural system
CC   disorders, respiratory disorders, olfactory disorders and wound
CC   healing. The present sequence represents an NHP of the invention the
CC   gene for which is located on the X chromosome.
XX
SQ   Sequence   711 AA;

  Query Match             88.0%;  Score 3775;  DB 22;  Length 711;
  Best Local Similarity   99.3%;  Pred. No. 1e-311;
  Matches  704;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy     62 MNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILN 121
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 MNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILN 60

Qy    122 TMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYE 181
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 TMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYE 120

Qy    182 EYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLH 241
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 EYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLH 180

Qy    242 AYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQA 301
          |||| |||||||||||||||||||||||||||||| |||||||||||||||||||||||||
Db    181 AYVRPKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYXLTVPFGQKPNIDVTDAMVDQX 240

Qy    302 WDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILMC 361
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 WDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILMC 300

Qy    362 TKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSI 421
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```

```
Db    301 TKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSI 360

Qy    422 GLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEMK 481
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 GLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEMK 420

Qy    482 REIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLHK 541
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 REIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLHK 480

Qy    542 CDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNKN 601
          ||||||||||||||||| |||||||||||||||||||||||||||||||||||||||||||
Db    481 CDISNSTEAGQKLFNMLRXGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNKN 540

Qy    602 SFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKNQ 661
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541 SFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKNQ 600

Qy    662 MILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDNS 721
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||:|
Db    601 MILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDDS 660

Qy    722 LEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKK 770
          |||||||||||||||||||||||||||||||||||||||||||||||||||
Db    661 LEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKK 709


RESULT 6
AAB48097
ID   AAB48097 standard; Protein; 805 AA.
XX
AC   AAB48097;
XX
DT   19-MAR-2001  (first entry)
XX
DE   Mouse Zace2-5 protein.
XX
KW   Zace2; metalloenzyme; angiotensin-converting enzyme; ACE; fertility;
KW   zinc metallopeptidase; blood pressure; zinc protease; hypertension;
KW   ventricular systolic dysfunction; renal impairment; heart failure;
KW   scleroderma renal crisis; atherosclerosis;. antiinflammatory; mouse;
KW   antiarthritic; bradykinin inactivator.
XX
OS   Mus sp.
XX
FH   Key             Location/Qualifiers
FT   Region          19..613
FT                   /note= "fragment specifically claimed for"
FT   Region          19..708
FT                   /note= "fragment specifically claimed for"
FT   Region          19..738
FT                   /note= "fragment specifically claimed for"
FT   Region          19..805
FT                   /note= "fragment specifically claimed for"
FT   Region          133..542
FT                   /note= "fragment specifically claimed for"
FT   Region          344..542
FT                   /note= "fragment specifically claimed for"
FT   Region          371..402
FT                   /note= "fragment specifically claimed for"
XX
PN   WO200070032-A1.
XX
PD   23-NOV-2000.
XX
PF   03-MAY-2000; 2000WO-US11932.
XX
PR   13-MAY-1999;   99US-0311482.
PR   27-AUG-1999;   99US-0384706.
XX
PA   (ZYMO ) ZYMOGENETICS INC.
XX
PI   Piddington CS,  Petrie CR,  Shoemaker KE,  Bishop PD;
XX
DR   WPI; 2001-025018/03.
DR   N-PSDB; AAC84368, AAC84369.
XX
PT   Angiotensin-converting enzyme, Zace2, useful for treating inflammatory
PT   bowel disease, e.g. Crohn's disease and ulcerative colitis, or diseases
PT   associated with inflammation such as arthritis and enterocolitis -
XX
PS   Claim 7; Page 104-109; 125pp; English.
XX
CC   The invention relates to the metalloenzyme Zace2. Zace2, an angiotensin-
CC   converting enzyme is a zinc metallopeptidase that plays roles in blood
CC   pressure regulation and fertility. Zace2 can be expressed by standard
CC   recombinant methodology. Zace2 polypeptides are useful for treating an
CC   inflammatory bowel disease (e.g. Crohn's disease and ulcerative colitis),
CC   diseases associated with inflammation like arthritis and enterocolitis,
CC   as targets for identifying modulators of zinc protease activity, for
CC   screening or identifying new angiotensin-converting enzyme (ACE)
CC   inhibitors, and as a basis for rational drug design for inhibitory
CC   molecules. The nucleic acids can be used to detect the expression of a
CC   Zace2 gene in a biological sample, as probes for in vivo diagnosis and
CC   for detecting and localizing Zace2 gene expression in tissue samples,
CC   to determine whether a subject's chromosomes contain a mutation in the
CC   Zace2 gene, and to detect aberrations associated with the Zace2 locus.
CC   Inhibitors of ACE are used for treating hypertension of various
CC   conditions, including left ventricular systolic dysfunction, progressive
CC   renal impairment, scleroderma renal crisis, congestive heart failure due
CC   to dysfunction, and treatment of atherosclerosis. Zace2 agonists may be
CC   used to treat infertility while Zace2 antagonists are used for inducing
CC   infertility. The present sequence represents the mouse Zace2-5 protein.
XX
SQ   Sequence   805 AA;

  Query Match             83.4%;  Score 3579;  DB 22;  Length 805;
  Best Local Similarity   82.1%;  Pred. No. 5.7e-295;
  Matches  661;  Conservative   60;  Mismatches   84;  Indels    0;  Gaps    0;

Qy      1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60
          |||||||||||||||| |||  || |||||: || ||||| ||||||||||||||||||| |
Db      1 MSSSSWLLLSLVAVTTAQSLTEENAKTFLNNFNQEAEDLSYQSSLASWNYNTNITEENAQ 60

Qy     61 NMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTIL 120
           |: |  ||||| :|||  || : |||||   :| |||||||:||| || ||:|:|||||
Db     61 KMSEAAAKWSAFYEEQSKTAQSFSLQEIQTPIIKRQLQALQQSGSSALSADKNKQLNTIL 120

Qy    121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180
          |||||||||||||||| ||||||||||:|||| | ||| |||||| ||:||||||||||
Db    121 NTMSTIYSTGKVCNPKNPQECLLLEPGLDEIMATSTDYNSRLWAWEGWRAEVGKQLRPLY 180

Qy    181 EEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHL 240
          |||||||||||||:| ||||||||||  | |||:|:| ||||||| || |||||||||
Db    181 EEYVVLKNEMARANNYNDYGDYWRGDYEAEGADGYNYNRNQLIEDVERTFAEIKPLYEHL 240

Qy    241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300
          ||||| |||: ||||||| |||||||||||||||||||| ||||| ||||||||||::|
Db    241 HAYVRRKLMDTYPSYISPTGCLPAHLLGDMWGRFWTNLYPLTVPFAQKPNIDVTDAMMNQ 300

Qy    301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360
          |||:|||:|||||||||||:|||||| ||||:| : :| |||||||||| ||||| |
Db    301 GWDAERIFQEAEKFFVSVGLPHMTQGFWANSMLTEPADGRKVVCHPTAWDLGHGDFRIKM 360

Qy    361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420
          |||||||:||||||||||||| ||||||||||||||||||||||||||||||||||||||
Db    361 CTKVTMDNFLTAHHEMGHIQYDMAYARQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420

Qy    421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480
          ||||  |||||:|||||||||||||||||||||||||||||:|||||:|||||||||
Db    421 IGLLPSDFQEDSETEINFLLKQALTIVGTLPFTYMLEKWRWMVFRGEIPKEQWMKKWWEM 480

Qy    481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540
          ||||||||||:|||||||||||||||||||||||||||:|||||||||||||: | ||
Db    481 KREIVGVVEPLPHDETYCDPASLFHVSNDYSFIRYYTRTIYQFQFQEALCQAAKYNGSLH 540
```

```
Qy    541 KCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK 600
          ||||||||||||||  || || ||||| |||||||:||:|:||||||:||| |||:|||:
Db    541 KCDISNSTEAGQKLLKMLSLGNSEPWTKALENVVGARNMDVKPLLNYFQPLFDWLKEQNR 600

Qy    601 NSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKN 660
          ||||||:|:|||||||||||||||||||  |||| :|||:||||||||||:||  :||
Db    601 NSFVGWNTEWSPYADQSIKVRISLKSALGANAYEWTNNEMFLFRSSVAYAMRKYFSIIKN 660

Qy    661 QMILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDN 720
          | : | ||||||::||||:|| ||||:|:||||:|||:||| |||||| |||| | ||||
Db    661 QTVPFLEEDVRVSDLKPRVSFYFFVTSPQNVSDVIPRSEVEDAIRMSRGRINDVFGLNDN 720

Qy    721 SLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKKKNKARSGENP 780
          ||||||| ||| || ||||:||||:||||| ::||||:||| |||: |||||: :  |||
Db    721 SLEFLGIHPTLEPPYQPPVTIWLIIFGVVMALVVVGIIILIVTGIKGRKKKNETKREENP 780

Qy    781 YASIDISKGENNPGFQNTDDVQTSF 805
          | |:|| |||:| ||||:|| ||||
Db    781 YDSMDIGKGESNAGFQNSDDAQTSF 805
```

RESULT 7
AAB48098
ID AAB48098 standard; Protein; 805 AA.
XX
AC AAB48098;
XX
DT 19-MAR-2001 (first entry)
XX
DE Mouse Zace2-10 protein.
XX
KW Zace2; metalloenzyme; angiotensin-converting enzyme; ACE; fertility;
KW zinc metallopeptidase; blood pressure; zinc protease; hypertension;
KW ventricular systolic dysfunction; renal impairment; heart failure;
KW scleroderma renal crisis; atherosclerosis;. antiinflammatory; mouse;
KW antiarthritic; bradykinin inactivator.
XX
OS Mus sp.
XX
FH Key   Location/Qualifiers
FT Region   19..613
FT   /note= "fragment specifically claimed for"
FT Region   19..708
FT   /note= "fragment specifically claimed for"
FT Region   19..738
FT   /note= "fragment specifically claimed for"
FT Region   19..805
FT   /note= "fragment specifically claimed for"
FT Region   133..542
FT   /note= "fragment specifically claimed for"
FT Region   344..542
FT   /note= "fragment specifically claimed for"
FT Region   371..402
FT   /note= "fragment specifically claimed for"
XX
PN WO200070032-A1.
XX
PD 23-NOV-2000.
XX
PF 03-MAY-2000; 2000WO-US11932.
XX
PR 13-MAY-1999; 99US-0311482.
PR 27-AUG-1999; 99US-0384706.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Piddington CS, Petrie CR, Shoemaker KE, Bishop PD;
XX
DR WPI; 2001-025018/03.
DR N-PSDB; AAC84370.
XX
PT Angiotensin-converting enzyme, Zace2, useful for treating inflammatory
PT bowel disease, e.g. Crohn's disease and ulcerative colitis, or diseases
PT associated with inflammation such as arthritis and enterocolitis -
XX
PS Claim 7; Page 113-118; 125pp; English.
XX
CC The invention relates to the metalloenzyme Zace2. Zace2, an angiotensin-
CC converting enzyme is a zinc metallopeptidase that plays roles in blood
CC pressure regulation and fertility. Zace2 can be expressed by standard
CC recombinant methodology. Zace2 polypeptides are useful for treating an
CC inflammatory bowel disease (e.g. Crohn's disease and ulcerative colitis),
CC diseases associated with inflammation like arthritis and enterocolitis,
CC as targets for identifying modulators of zinc protease activity, for
CC screening or identifying new angiotensin-converting enzyme (ACE)
CC inhibitors, and as a basis for rational drug design for inhibitory
CC molecules. The nucleic acids can be used to detect the expression of a
CC Zace2 gene in a biological sample, as probes for in vivo diagnosis and
CC for detecting and localizing Zace2 gene expression in tissue samples,
CC to determine whether a subject's chromosomes contain a mutation in the
CC Zace2 gene, and to detect aberrations associated with the Zace2 locus.
CC Inhibitors of ACE are used for treating hypertension of various
CC conditions, including left ventricular systolic dysfunction, progressive
CC renal impairment, scleroderma renal crisis, congestive heart failure due
CC to dysfunction, and treatment of atherosclerosis. Zace2 agonists may be
CC used to treat infertility while Zace2 antagonists are used for inducing
CC infertility. The present sequence represents the mouse Zace2-10 protein.
XX
SQ Sequence 805 AA;

Query Match 83.0%; Score 3561; DB 22; Length 805;
Best Local Similarity 81.9%; Pred. No. 1.9e-293;
Matches 659; Conservative 60; Mismatches 86; Indels 0; Gaps 0;

```
Qy      1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60
          |||||||||||||||| ||| || |||||: || ||||| ||||||||||||||||| |
Db      1 MSSSSWLLLSLVAVTTAQSLTEENAKTFLNNFNQEAEDLSYQSSLASWNYNTNITEENAQ 60

Qy     61 NMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTIL 120
            |: |  |||||  :|||  || : |||||   :| |||||||:||| || ||:|:|||||
Db     61 KMSEAAAKWSAFYEEQSKTAQSFSLQEIQTPIIKRQLQALQQSGSSALSADKNKQLNTIL 120

Qy    121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180
          ||||||||||||||| |||||||||||:|||| | ||| |||||| ||:||||||||||
Db    121 NTMSTIYSTGKVCNPRNPQECLLLEPGLDEIMATSTDYNSRLWAWEGWRAEVGKQLRPLY 180

Qy    181 EEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHL 240
          |||||||||||||||:| |||||||||||  | |||:|:| |||||| || |||||||||
Db    181 EEYVVLKNEMARANNYNDYGDYWRGDYEAEGADGYNYNRNQLIEDVERTFAEIKPLYEHL 240

Qy    241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300
          ||||| |||: ||||||| |||||||||||||||||||| ||||| ||||||||||::|
Db    241 HAYVRRKLMDTYPSYISPTGCLPAHLLGDMWGRFWTNLYPLTVPFAQKPNIDVTDAMMNQ 300

Qy    301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360
          |||:|||:||||||||||||:|||||| |||||:| : :| |||||||||| ||||| |
Db    301 GWDAERIFQEAEKFFVSVGLPHMTQGFWANSMLTEPADGRKVVCHPTAWDLGHGDFRIKM 360

Qy    361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420
          |||||||:|||||||||||||||||| ||||||||||||||||||||||||||||||||||
Db    361 CTKVTMDNFLTAHHEMGHIQYDMAYARQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420

Qy    421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480
          ||||  ||||||:|||||||||||||||||||||||||||||||:|||||:|||||||||
Db    421 IGLLPSDFQEDSETEINFLLKQALTIVGTLPFTYMLEKWRWMVFRGEIPKEQWMKKWWEM 480

Qy    481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540
          ||||||||||:| |||||||||||||||||||||||||:|||||||||||||: | ||
Db    481 KREIVGVVEPLPRDETYCDPASLFHVSNDYSFIRYYTRTIYQFQFQEALCQAAKYNGSLH 540

Qy    541 KCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK 600
          |||||||||||||  || || ||||| |||||||:||:|:|||||||:||| |||:|||:
Db    541 KCDISNSTEAGQKLLKMLSLGNSEPWTEALENVVGARNMDVKPLLNYFQPLFDWLKEQNR 600

Qy    601 NSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKN 660
          |||||||:|:|||||||||||||||||||  |||| :|||:||||||||||:|  :||
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```
Db    601 NSFVGWNTEWSPYADQSIKVRISLKSALGANAYEWTNNEMFLFRSSVAYAMRKYSSIIKN 660

Qy    661 QMILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDN 720
          | : | ||||||::||||:|| ||||:|:||||:|||:||| |||||| |||| | ||||
Db    661 QTVPFLEEDVRVSDLKPRVSFYFFVTSPQNVSDVIPRSEVEDAIRMSRGRINDVFGLNDN 720

Qy    721 SLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKKKNKARSGENP 780
          ||||||| ||| || ||||:||||:||||| ::||||:||| |||: |||||: :  |||
Db    721 SLEFLGIHPTLEPPYQPPVTIWLIIFGVVMALVVVGIIILIVTGIKGRKKKNETKREENP 780

Qy    781 YASIDISKGENNPGFQNTDDVQTSF 805
          | |:|| |||:| ||||:|| ||||
Db    781 YDSMDIGKGESNAGFQNSDDAQTSF 805
```

RESULT 8
AAU12207
ID AAU12207 standard; Protein; 555 AA.
XX
AC AAU12207;
XX
DT 24-OCT-2001 (first entry)
XX
DE Human PRO1885 polypeptide sequence.
XX
KW Human secretory and transmembrane; PRO; mammalian; cancer; lung;
KW breast; prostate; cervical; tumour necrosis factor-alpha; TNF-alpha;
KW cartilage; ear; proliferation; glucose; free fatty acid; skeletal muscle;
KW adipocyte; A-peptide; factor VIIA; gene therapy.
XX
OS Homo sapiens.
XX
PN WO200140466-A2.
XX
PD 07-JUN-2001.
XX
PF 01-DEC-2000; 2000WO-US32678.
XX
PR 01-DEC-1999; 99WO-US28301.
PR 01-DEC-1999; 99WO-US28634.
PR 02-DEC-1999; 99WO-US28551.
PR 02-DEC-1999; 99WO-US28564.
PR 02-DEC-1999; 99WO-US28565.
PR 09-DEC-1999; 99US-0170262.
PR 16-DEC-1999; 99WO-US30095.
PR 20-DEC-1999; 99WO-US30911.
PR 20-DEC-1999; 99WO-US30999.
PR 30-DEC-1999; 99WO-US31243.
PR 06-JAN-2000; 2000WO-US00277.
PR 06-JAN-2000; 2000WO-US00376.
PR 11-FEB-2000; 2000WO-US03565.
PR 18-FEB-2000; 2000WO-US04341.
PR 18-FEB-2000; 2000WO-US04342.
PR 22-FEB-2000; 2000WO-US04414.
PR 24-FEB-2000; 2000WO-US04914.
PR 24-FEB-2000; 2000WO-US05004.
PR 01-MAR-2000; 2000WO-US05601.
PR 20-MAR-2000; 2000WO-US07377.
PR 21-MAR-2000; 2000WO-US07532.
PR 30-MAR-2000; 2000WO-US08439.
PR 17-MAY-2000; 2000WO-US13705.
PR 22-MAY-2000; 2000WO-US14042.
PR 30-MAY-2000; 2000WO-US14941.
PR 02-JUN-2000; 2000WO-US15264.
PR 10-NOV-2000; 2000WO-US30873.
XX
PA (GETH) GENENTECH INC.
XX
PI Baker KP, Beresini M, Deforge L, Desnoyers L, Filvaroff E, Gao W;
PI Gerritsen ME, Goddard A, Godowski PJ, Gurney AL, Sherwood S;
PI Smith V, Stewart TA, Tumas D, Watanabe CK, Wood WI, Zhang Z;
XX
DR WPI; 2001-408281/43.
DR N-PSDB; AAS21279.
XX
PT Isolated, secretory and transmembrane PRO polypeptide used to detect
PT other PRO polypeptides, link bioactive molecules to cells expressing
PT PRO polypeptides, and detect the presence of mammalian tumours e.g.
PT lung, breast, prostate, cervical -
XX
PS Claim 12; Fig 72; 813pp; English.
XX
CC AAU12172-AAU12446 represent novel human secretory and transmembrane
CC PRO polypeptides. The PRO polypeptides are useful to detect other
CC PRO polypeptides, to link bioactive molecules to cells expressing
CC PRO polypeptides, to modulate biological activities of cells expressing
CC PRO polypeptides, and to detect the presence of mammalian lung, colon,
CC breast, prostate, rectal, cervical or liver tumours by comparing PRO
CC polypeptide expression in a cell sample to that in a control sample.
CC Some of the 275 sequences are also useful to stimulate the release of
CC tumour necrosis factor-alpha (TNF-alpha) from human blood, the
CC proliferation or differentiation of chondrocytes, the proliferation or
CC gene expression in pericyte cells, the release of proteoglycans from
CC cartilage, the proliferation of inner ear utricular supporting cells or
CC of T-lymphocytes, the release of a cytokine from peripheral blood
CC monocytes (PBMCs), or the proliferation of endothelial cells. Some of
CC the PRO polypeptides may modulate glucose or free fatty acid uptake by
CC skeletal muscle cells or by adipocytes; or inhibit binding of A-peptide
CC to factor VIIA. The PRO polypeptides can be used in assays to identify
CC molecules involved in binding interactions. The polynucleotides encoding
CC PRO polypeptides can be used to generate probes, antisense RNA/DNA,
CC transgenic or knock out animals and can be used in gene therapy.
XX
SQ Sequence 555 AA;

Query Match 69.4%; Score 2979; DB 22; Length 555;
Best Local Similarity 99.8%; Pred. No. 3.1e-244;
Matches 553; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQ 60

Qy     61 NMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTIL 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 NMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTIL 120

Qy    121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 NTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLY 180

Qy    181 EEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHL 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 EEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHL 240

Qy    241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 HAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQ 300

Qy    301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 AWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILM 360

Qy    361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420

Qy    421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480

Qy    481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540
          ||||||||||||||||||||||||||:||||||||||||||||||||||||||||||||||
Db    481 KREIVGVVEPVPHDETYCDPASLFHVSDDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540

Qy    541 KCDISNSTEAGQKL 554
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                ||||||||||||||||
Db    541 KCDISNSTEAGQKL 554


RESULT 9
AAY67311
ID   AAY67311 standard; Protein; 480 AA.
XX
AC   AAY67311;
XX
DT   11-APR-2000  (first entry)
XX
DE   Human MPROT15 amino acid sequence #2.
XX
KW   MPROT15; treatment; hypertension; human; myocardial disease; apoplexy;
KW   heart disease; apoplexy; heart disease; nervous denaturation; hormone;
KW   Alzheimer's disease; cytokine.
XX
OS   Homo sapiens.
XX
PN   JP11318472-A.
XX
PD   24-NOV-1999.
XX
PF   22-JAN-1999;   99JP-0014949.
XX
PR   13-MAY-1998;   98GB-0010373.
PR   18-AUG-1998;   98GB-0018009.
XX
PA   (SMIK ) SMITHKLINE BEECHAM PLC.
XX
DR   WPI; 2000-109268/10.
XX
PT   MPROT15 polypeptide and MPROT15 polynucleotides - useful for the
PT   treatment of hypertension, myocardial diseases, apoplexy, heart
PT   diseases, nervous denaturation, Alzheimer's disease etc.
XX
PS   Claim 19; Page 20-21; 22pp; Japanese.
XX
CC   This is amino acid sequence #2 of human MPROT15. The MPROT15
CC   polynucleotide and polypeptide sequences can be used for the treatment of
CC   hypertension, myocardial diseases, apoplexy, heart diseases, nervous
CC   denaturation, Alzheimer's disease and diseases related to the processing
CC   of peptide hormones and cytokines.
XX
SQ   Sequence   480 AA;

  Query Match             59.2%;  Score 2539;  DB 21;  Length 480;
  Best Local Similarity   100.0%;  Pred. No. 6.1e-207;
  Matches  471;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      11 LVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQNMNNAGDKWS 70
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      10 LVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQNMNNAGDKWS 69

Qy      71 AFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILNTMSTIYSTG 130
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      70 AFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILNTMSTIYSTG 129

Qy     131 KVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYEEYVVLKNEM 190
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     130 KVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYEEYVVLKNEM 189

Qy     191 ARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLHAYVRAKLMN 250
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     190 ARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLHAYVRAKLMN 249

Qy     251 AYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQAWDAQRIFKE 310
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     250 AYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQAWDAQRIFKE 309

Qy     311 AEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILMCTKVTMDDFL 370
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     310 AEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILMCTKVTMDDFL 369

Qy     371 TAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSIGLLSPDFQE 430
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     370 TAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSIGLLSPDFQE 429

Qy     431 DNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEMK 481
           |||||||||||||||||||||||||||||||||||||||||||||||||||
Db     430 DNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEMK 480


RESULT 10
AAU09102
ID   AAU09102 standard; Protein; 261 AA.
XX
AC   AAU09102;
XX
DT   20-DEC-2001  (first entry)
XX
DE   Novel human protein NHP #11.
XX
KW   Human; novel human protein; NHP; antidiabetic; antirheumatic;
KW   antiarthritic; cytostatic; antiarteriosclerotic; vulnerary;
KW   neuroprotective; nootropic; antiparkinsonian;
KW   anti-human immunodeficiency virus; antiasthmatic; vasotropic; cardiant;
KW   hypotensive; anorectic; antiinfertility; neuroleptic; anticonvulsant;
KW   antimanic; immunosuppressive; cerebroprotective; antimicrobial;
KW   antiinflammatory; antibacterial; antipsoriatic; thyromimetic;
KW   immunomodulator; antiseborrheic; dermatological; vasoconstriction;
KW   gastrointestinal disorder; cardiovascular disorder; hypertension;
KW   coronary heart disease; arteriosclerosis; anorexia; obesity; bulimia;
KW   cachexia; male infertility; impotence; testicular cancer; lung tumour;
KW   hyperproliferative disorder; pulmonary system disorder;
KW   central nervous system disorder; bone disorder;
KW   neurodegenerative disease; Alzheimer's disease; Parkinson's disease;
KW   Huntington's disease; schizophrenia; mania; dementia; paranoia;
KW   panic disorder; learning disability; amyotropic lateral sclerosis;
KW   psychosis; autism; sleep disorder; immune system disorder;
KW   Hashimoto's thyroiditis; musculo-skeletal system disorders;
KW   multiple sclerosis; ischaemic brain injury; stroke; infectious disease;
KW   diabetes mellitus; immunological disorder; asthma; AIDS; immunogen;
KW   acquired immunodeficient syndrome; leukaemia; rheumatoid arthritis;
KW   inflammatory bowel disease; sepsis; acne; psoriasis; lupus erythematosus;
KW   neural system disorder; respiratory disorder; olfactory disorder;
KW   wound healing.
XX
OS   Homo sapiens.
XX
PN   WO200174896-A1.
XX
PD   11-OCT-2001.
XX
PF   02-APR-2001; 2001WO-US10542.
XX
PR   03-APR-2000; 2000US-194118P.
PR   29-SEP-2000; 2000US-236384P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Moore PA,  Ni J,  Soppet DR,  Coleman TA,  Gentz RL,  Endress GA;
PI   Li Y,  Dillon PJ;
XX
DR   WPI; 2001-626394/72.
DR   N-PSDB; AAS14890.
XX
PT   New human proteins, useful for diagnosing, treating, preventing and/or
PT   prognosing disorders related to the proteins, including cardiovascular
PT   disorders, autoimmune disorders and reproductive disorders  -
XX
PS   Claim 11; Page 311-312; 318pp; English.
XX
CC   The invention relates to novel human proteins (NHP) and the
CC   nucleic acids that encode them and antibodies raised against them.
```

```
CC   The proteins, antibodies and nucleic acids are useful in the diagnosis,
CC   prognosis, prevention and/or treatment or diseases and/or disorders
CC   involving vasoconstriction, gastrointestinal disorders, cardiovascular
CC   disorders (e.g. hypertension, erectile dysfunction, high blood pressure,
CC   coronary heart disease and arteriosclerosis), anorexia, obesity, bulimia,
CC   cachexia, disorders of small intestine, disorders of reproductive system
CC   (e.g. male infertility and/or impotence), testicular cancer, lung tumours
CC   and other hyperproliferative disorders, disorders of pulmonary system,
CC   central nervous system disorders, bone disorders, neurodegenerative
CC   diseases and behavioural disorders (e.g. Alzheimer's disease, Parkinson's
CC   disease, Huntington's disease, schizophrenia, mania, dementia, paranoia,
CC   panic disorder, learning disabilities, amyotropic lateral sclerosis,
CC   psychoses, autism, sleep disorders), immune system disorders (e.g.
CC   Hashimoto's thyroiditis), renal and musculo-skeletal system disorders,
CC   central nervous system disorders (e.g. multiple sclerosis, ischaemic
CC   brain injury and/or stroke), infectious diseases, diabetes mellitus,
CC   immunological disorders (e.g. asthma, acquired immunodeficient syndrome
CC   (AIDS), leukaemia, rheumatoid arthritis, inflammatory bowel disease,
CC   sepsis, acne, psoriasis and lupus erythematosus), neural system
CC   disorders, respiratory disorders, olfactory disorders and wound
CC   healing. The present sequence represents an NHP of the invention.
XX
SQ   Sequence   261 AA;

  Query Match             31.7%;  Score 1359;  DB 22;  Length 261;
  Best Local Similarity   99.6%;  Pred. No. 4.4e-107;
  Matches  252;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      62 MNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILN 121
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILN 60

Qy     122 TMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYE 181
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 TMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYE 120

Qy     182 EYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLH 241
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 EYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLH 180

Qy     242 AYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQA 301
           |||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 AYVRPKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQA 240

Qy     302 WDAQRIFKEAEKF 314
           |||||||||||||
Db     241 WDAQRIFKEAEKF 253


RESULT 11
AAR10426
ID   AAR10426 standard; Protein; 732 AA.
XX
AC   AAR10426;
XX
DT   10-APR-1991  (first entry)
XX
DE   Human testicular angiotensin conversion enzyme.
XX
KW   human testicular angiotensin conversion enzyme; tACE;
KW   male sterility.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1..21
FT                   /label= signal peptide
FT   Protein         22..732
FT                   /label= mature tACE
XX
PN   WO9100354-A.
XX
PD   10-JAN-1991.
XX
PF   05-JUL-1990;   90WO-FR00513.
XX
PR   05-JUL-1989;   89FR-0009062.
XX
PA   (INRM ) INST NAT SANTE RECH.
XX
PI   Soubrier F,  Alhenc-Gelas F,  Hubert C,  Corvol P;
XX
DR   WPI; 1991-036748/05.
DR   N-PSDB; AAQ10328.
XX
PT   Nucleic acid - encoding human testicular angiotensin conversion
PT   enzyme, used e.g. for in vitro detection of enzyme in organism
XX
PS   Claim 1; Fig 1; 48pp; French.
XX
CC   A bank of human testicular cDNA in Lambda gt11 was screened with a
CC   probe containing the final 3248 nucleotides of endothelial ACE. The
CC   complete sequence of tACE was reconstructed from 4 separate clones.
CC   The isolated nucleic acid sequence was inserted into a plasmid for
CC   expression of the protein. The invention covers polypeptides
CC   containing all or part of tACE sequence. These are useful in
CC   treatment of inflammation or infectious diseases, especially acute
CC   pancreatitis, or diseases in which kinins are involved. Antibodies
CC   against the polypeptides are useful as immunoassay reagents for
CC   tACE.
XX
SQ   Sequence   732 AA;

  Query Match             31.3%;  Score 1344;  DB 12;  Length 732;
  Best Local Similarity   41.8%;  Pred. No. 4.1e-105;
  Matches  259;  Conservative  119;  Mismatches  204;  Indels   38;  Gaps   10;

Qy      15 TAAQS----TIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEE--------NVQNM 62
           |:|||    | | :|  |:::::  :: :: : : |:|||||||| |        |:|
Db      61 TSAQSPNLVTDEAEASKFVEEYDRTSQVVWNEYAEANWNYNTNITTETSKILLQKNMQIA 120

Qy      63 NNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILNT 122
           |:          :  | |: : : ::|| |:|  :: :|    : |   : : | ||
Db     121 NHT--------LKYGTQARKFDVNQLQNTTIKRIIKKVQDLERAALPAQELEEYNKILLD 172

Qy     123 MSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYEE 182
           | | ||   ||:|:    || ||| |  :|| |  | : ||||| || : |: :   | :
Db     173 METTYSVATVCHPNG--SCLQLEPDLTNVMATSRKYEDLLWAWEGWRDKAGRAILQFYPK 230

Qy     183 YVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLHA 242
           || | |: || | | | || ||  ||   ::          :|:|  |:|::||| :|||
Db     231 YVELINQAARLNGYVDAGDSWRSMYETPSLE----------QDLERLFQELQPLYLNLHA 280

Qy     243 YVRAKLMNAY-PSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQA 301
           ||| |   |   :|:  | :|||||||:|| : |:|:|  | |||   |::| |:||: |
Db     281 YVRRALHRHYGAQHINLEGPIPAHLLGNMWAQTWSNIYDLVVPFPSAPSMDTTEAMLKQG 340

Qy     302 WDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKG-DFRILM 360
           |  :|:|||||: || |:||  :   ||  |||  | : :: ||| :|||   | ||||
Db     341 WTPRRMFKEADDFFTSLGLLPVPPEFWNKSMLEKPTDGREVVCHASAWDFYNGKDFRIKQ 400

Qy     361 CTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKS 420
           || | ::| : ||||||||||| | |   |  || ||| |||||:|::::|| :|||||
Db     401 CTTVNLEDLVVAHHEMGHIQYFMQYKDLPVALREGANPGFHEAIGDVLALSVSTPKHLHS 460

Qy     421 IGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEM 480
           : ||| :   | | :||||:| ||  :  :||:|::::|||  || | | |: : ::|| :
Db     461 LNLLSSEGGSD-EHDINFLMKMALDKIAFIPFSYLVDQWRWRVFDGSITKENYNQEWWSL 519

Qy     481 KREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLH 540
           : :  |:  |||  :   || : ||: :   :|||:   : |||| |||||||  | ||||
Db     520 RLKYQGLCPPVPRTQGDFDPGAKFHIPSSVPYIRYFVSFIIQFQFHEALCQAAGHTGPLH 579

Qy     541 KCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK 600
           ||||  | ||||:|   ::|| | ||  |:: : |  ||:   :|:||:|| ||: :|:
Db     580 KCDIYQSKEAGQRLATAMKLGFSRPWPEAMQLITGQPNMSASAMLSYFKPLLDWLRTENE 639
```

```
Qy    601 --NSFVGW-STDWSPYADQS 617
              :||   :|:| : :|
Db    640 LHGEKLGWPQYNWTPNSARS 659


RESULT 12
AAR04111
ID   AAR04111 standard; peptide; 1306 AA.
XX
AC   AAR04111;
XX
DT   07-SEP-1990  (first entry)
XX
DE   Human angiotensin converting enzyme (ACE).
XX
KW   human angiotensin converting enzyme; hypertension; bradykinin.
XX
OS   synthetic.
XX
FH   Key             Location/Qualifiers
FT   Protein         30..1277
FT                   /label=mature ACE
FT                   /note="derived from pre-ACE by removal of signal peptide"
FT   Modified-site   38..38
FT                   /label=putative N-glycosylation site
FT   Modified-site   54..56
FT                   /label=putative N-glycosylation site
FT   Modified-site   74..76
FT                   /label=putative N-glycosylation site
FT   Modified-site   111..113
FT                   /label=putative N-glycosylation site
FT   Modified-site   146..148
FT                   /label=pitative N-glycosylation site
FT   Modified-site   160..162
FT                   /label=putative N-glycosylation site
FT   Modified-site   318..320
FT                   /label=putative N-glycosylation site
FT   Modified-site   445..447
FT                   /label=putative N-glycosylation site
FT   Modified-site   509..511
FT                   /label=putative N-glycosylation site
FT   Modified-site   523..525
FT                   /label=putative N-glycosylation site
FT   Modified-site   677..679
FT                   /label=putative N-glycosylation site
FT   Modified-site   713..715
FT                   /label=putative N-glycosylation site
FT   Modified-site   760..762
FT                   /label=putative N-glycosylation site
FT   Modified-site   942..944
FT                   /label=putative N-glycosylation site
FT   Modified-site   1191..1193
FT                   /label=putative N-glycosylation site
FT   Modified-site   1225..1227
FT                   /label=putative N-glycosylation site
XX
PN   WO9003435-A.
XX
PD   05-APR-1990.
XX
PF   27-SEP-1989;   89WO-FR00496.
XX
PR   27-SEP-1988;   88FR-0012620.
XX
PA   (INRM ) INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE.
XX
PI   Soubrier F,  Alhenc-Gelas F,  Hubert C,  Corvol P;
XX
DR   WPI; 1990-132272/17.
DR   N-PSDB; AAQ04027.
XX
PT   New DNA encoding human angiotensin converting enzyme used eg in
PT   diagnosis of hypertension, evaluation of enzyme inhibitors
XX
PS   Disclosure; ; p; French.
XX
CC   Human angiotensin converting enzyme hydrolyses angiotensin I and kinins.
CC   Either intact enzyme or fragments thereof can be used to generate
CC   antibodies for diagnostic use. Oligonucleotide probes can also be made
CC   which are complementary to the sequence encoding the enzyme.
XX
SQ   Sequence   1306 AA;

  Query Match             31.2%;  Score 1337;  DB 11;  Length 1306;
  Best Local Similarity   41.7%;  Pred. No. 4e-104;
  Matches  255;  Conservative  118;  Mismatches  204;  Indels   34;  Gaps    9;

Qy     20 TIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEE--------NVQNMNNAGDKWSA 71
          | | :|  |:::::  :: :: : : |:|||||||| |        |:|  |:
Db    644 TDEAEASKFVEEYDRTSQVVWNEYAEANWNYNTNITTETSKILLQKNMQIANHT------ 697

Qy     72 FLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILNTMSTIYSTGK 131
             :  | |: : : ::|| |:|  :: :|    : |   : :  | ||  | | ||
Db    698 --LKYGTQARKFDVNQLQNTTIKRIIKKVQDLERAALPAQELEEYNKILLDMETTYSVAT 755

Qy    132 VCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYEEYVVLKNEMA 191
          ||:|:    || ||| |  :|| |  | : ||||| || : |: :   | :|| | |: |
Db    756 VCHPNG--SCLQLEPDLTNVMATSRKYEDLLWAWEGWRDKAGRAILQFYPKYVELINQAA 813

Qy    192 RANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLHAYVRAKLMNA 251
          | | | | || ||  ||   ::          :|:|  |:|::||| :||||||  |
Db    814 RLNGYVDAGDSWRSMYETPSLE----------QDLERLFQELQPLYLNLHAYVRRALHRH 863

Qy    252 Y-PSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQAWDAQRIFKE 310
          |   :|:  | :|||||||:|| : |:|:| | |||   |::| |:||: | |  :|:|||
Db    864 YGAQHINLEGPIPAHLLGNMWAQTWSNIYDLVVPFPSAPSMDTTEAMLKQGWTPRRMFKE 923

Qy    311 AEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKG-DFRILMCTKVTMDDF 369
          |: || |:||  :   ||  |||  | : :: ||| :|||   | ||||  || | ::|
Db    924 ADDFFTSLGLLPVPPEFWNKSMLEKPTDGREVVCHASAWDFYNGKDFRIKQCTTVNLEDL 983

Qy    370 LTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSIGLLSPDFQ 429
          : |||||||||| | |   |  || ||| |||||:|::::|| :|||||  |: ||| :
Db    984 VVAHHEMGHIQYFMQYKDLPVALREGANPGFHEAIGDVLALSVSTPKHLHSLNLLSSEGG 1043

Qy    430 EDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEMKREIVGVVE 489
          | | :||||:| ||  :  :||:|:::|||  || | | |: : ::|| :: :  |:
Db   1044 SD-EHDINFLMKMALDKIAFIPFSYLVDQWRWRVFDGSITKENYNQEWWSLRLKYQGLCP 1102

Qy    490 PVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLHKCDISNSTE 549
          |||  :   || : ||: :   :|||:   : |||| ||||||| | ||||||||  | |
Db   1103 PVPRTQGDFDPGAKFHIPSSVPYIRYFVSFIIQFQFHEALCQAAGHTGPLHKCDIYQSKE 1162

Qy    550 AGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK--NSFVGW- 606
          |||:|   ::|| | ||  |:: : |  ||:   :|:||:||  ||: :|:     :||
Db   1163 AGQRLATAMKLGFSRPWPEAMQLITGQPNMSASAMLSYFKPLLDWLRTENELHGEKLGWP 1222

Qy    607 STDWSPYADQS 617
            :|:| : :|
Db   1223 QYNWTPNSARS 1233


RESULT 13
AAW68155
ID   AAW68155 standard; Protein; 1306 AA.
XX
AC   AAW68155;
XX
DT   09-NOV-1998  (first entry)
XX
DE   Human angiotensin converting enzyme.
XX
KW   Angiotensin converting enzyme; ACE; hypertension; exercise; human;
KW   genetic marker.
XX
```

```
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1..29
FT                   /label= Sig_peptide
FT   Protein         30..1307
FT                   /label= Mat_protein
XX
PN   WO9831835-A1.
XX
PD   23-JUL-1998.
XX
PF   22-DEC-1997;   97WO-US22974.
XX
PR   27-MAY-1997;   97US-0048309.
PR   16-JAN-1997;   97US-0035382.
XX
PA   (UYMA-) UNIV MARYLAND BALTIMORE.
PA   (UYPI-) UNIV PITTSBURGH.
XX
PI   Ferrell RE,  Hagberg JM;
XX
DR   WPI; 1998-414128/35.
DR   N-PSDB; AAV41320.
XX
PT   Analysis of genetic markers to identify subjects who will benefit
PT   from exercise - also assessing risk of cardiovascular disease from
PT   angiotensin-converting enzyme genotype
XX
PS   Disclosure; Page 35-41; 61pp; English.
XX
CC   This is human angiotensin converting enzyme (ACE).  The ACE gene
CC   (see AAV41320) is polymorphic with 2 common alleles (I and D),
CC   resulting in 3 genotypes, II, ID and DD.  It is an object of the
CC   invention to identify individuals possessing a certain genotype and
CC   associated ailment, and to determine if the health of that
CC   individual can be improved by altering behavior.  A claimed method
CC   comprises identifying individuals having a certain phenotype,
CC   determining the presence or absence of genetic markers associated
CC   with the phenotype, and instituting a lifestyle change to exploit
CC   or counteract the phenotype expressed by the gene marker.  If the
CC   phenotype is hypertension, the gene marker is at least one
CC   insertion (I) ACE allele and exercise training is instituted to
CC   decrease systolic and diastolic blood pressure.  The gene marker
CC   can be identified by PCR amplification (see AAV41321-22) of the
CC   appropriate gene region.  The general method can be used to
CC   identify subjects who will benefit most from physical exercise
CC   and also to identify those who are likely to be successful in
CC   sports.
XX
SQ   Sequence   1306 AA;

  Query Match             31.1%;  Score 1336;  DB 19;  Length 1306;
  Best Local Similarity   41.7%;  Pred. No. 4.9e-104;
  Matches  255;  Conservative  118;  Mismatches  204;  Indels   34;  Gaps    9;

Qy      20 TIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEE--------NVQNMNNAGDKWSA 71
           | | :|  |:::::  :: :: : : |:||||||||| |        |:|  |:
Db     644 TDEAEASKFVEEYDRTSQVVWNEYAEANWNYNTNITTETSKILLQKNMQIANHT------ 697

Qy      72 FLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILNTMSTIYSTGK 131
              : | |: : : ::|| |:|  :: :|    : |   : :  | ||  | | ||
Db     698 --LKYGTQARKFDVNQLQNTTIKRIIKKVQDLERAALPAQELEEYNKILLDMETTYSVAT 755

Qy     132 VCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYEEYVVLKNEMA 191
           ||:|:    || ||| |  :|| |  | : ||||| || : |: :   | :|| | |: |
Db     756 VCHPNG--TCLQLEPDLTNVMATSRKYEDLLWAWEGWRDKAGRAILQFYPKYVELINQAA 813

Qy     192 RANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLHAYVRAKLMNA 251
           | | | || ||  ||   ::          :|:|  |:|::||| :||||||  |
Db     814 RLNGYVDAGDSWRSMYETPSLE----------QDLERLFQELQPLYLNLHAYVRRALHRH 863

Qy     252 Y-PSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQAWDAQRIFKE 310
           |   :|:  | :|||||||:|| : |:|:| | |||   |::| |:||: | |  :|:|||
Db     864 YGAQHINLEGPIPAHLLGNMWAQTWSNIYDLVVPFPSAPSMDTTEAMLKQGWTPRRMFKE 923

Qy     311 AEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKG-DFRILMCTKVTMDDF 369
           |: || |:|| :   ||  |||  | : :: ||| :|||   | |||  || | ::|
Db     924 ADDFFTSLGLLPVPPEFWNKSMLEKPTDGREVVCHASAWDFYNGKDFRIKQCTTVNLEDL 983

Qy     370 LTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSIGLLSPDFQ 429
           : |||||||||| | |   |  || ||| |||||:|::::|| :|||| |: ||| :
Db     984 VVAHHEMGHIQYFMQYKDLPVALREGANPGFHEAIGDVLALSVSTPKHLHSLNLLSSEGG 1043

Qy     430 EDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEMKREIVGVVE 489
           | | :||||:| ||  :  :||:|:::::||| || | | |: : ::|| :: :  |:
Db    1044 SD-EHDINFLMKMALDKIAFIPFSYLVDQWRWRVFDGSITKENYNQEWWSLRLKYQGLCP 1102

Qy     490 PVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLHKCDISNSTE 549
           |||  :   || : ||: :   :|||:   : |||| ||||||| | ||||||||  | |
Db    1103 PVPRTQGDFDPGAKFHIPSSVPYIRYFVSFIIQFQFHEALCQAAGHTGPLHKCDIYQSKE 1162

Qy     550 AGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK--NSFVGW- 606
           |||:|   ::|| | ||  |:: : |  ||:   :|:||:||  ||: :|:     :||
Db    1163 AGQRLATAMKLGFSRPWPEAMQLITGQPNMSASAMLSYFKPLLDWLRTENELHGEKLGWP 1222

Qy     607 STDWSPYADQS 617
              :|:| : :|
Db    1223 QYNWTPNSARS 1233


RESULT 14
AAU02957
ID   AAU02957 standard; Protein; 1249 AA.
XX
AC   AAU02957;
XX
DT   12-SEP-2001  (first entry)
XX
DE   Angiotensin converting enzyme (ACEV) splice variant protein #57.
XX
KW   Angiotensin converting enzyme splice variant; ACEV; interleukin 6;
KW   granulocyte colony stimulating factor receptor; glucagon; hypertrophy;
KW   platelet-derived endothelial cell growth factor; cardiovascular disease;
KW   cellular tumour antigen P53; cyclin-dependent kinase inhibitor 1C;
KW   vasoactive intestinal polypeptide receptor 2; arteriosclerosis; cancer;
KW   myocardial infarction; coronary arterial thrombosis; renal disease;
KW   diabetic nephropathy; muscular disease; immune disorder; sarcoidosis;
KW   multiple sclerosis; immune complex nephritis; deep vein thrombosis;
KW   nonarcoidotic pulmonary granulomatous disease; endothelial abnormality;
KW   vascular disorder; asbestosis.
XX
OS   Mus sp..
XX
PN   WO200136632-A2.
XX
PD   25-MAY-2001.
XX
PF   17-NOV-2000; 2000WO-IL00766.
XX
PR   17-NOV-1999;   99IL-0132978.
PR   10-DEC-1999;   99IL-0133455.
XX
PA   (COMP-) COMPUGEN LTD.
XX
PI   Levine Z,  David A,  Azar I,  Khosravi R,  Bernstein J;
XX
DR   WPI; 2001-336004/35.
DR   N-PSDB; AAS06057.
XX
PT   Novel alternative splicing variants e.g. variant of angiotensin
PT   converting enzyme (ACEV), useful in identifying candidate compounds
PT   capable of binding to the variant and to detect anti-variant antibodies
PT   -
XX
PS   Claim 4; Fig 57; 519pp; English.
```

```
XX
CC   The sequence represents an angiotensin converting enzyme splice variant
CC   (ACEV) polypeptide. The polypeptides of the invention include variants of
CC   granulocyte colony stimulating factor receptor, glucagon, interleukin 6,
CC   platelet-derived endothelial cell growth factor, cyclin-dependent kinase
CC   inhibitor 1C, cellular tumour antigen P53, and vasoactive intestinal
CC   polypeptide receptor 2. The polypeptides and their associated nucleic
CC   acids are useful for identification of variant sequences and detection of
CC   candidate compounds capable of binding the molecules. The sequences of
CC   the invention can be used in the treatment and diagnosis of various
CC   disorders including cardiovascular diseases such as arteriosclerosis,
CC   myocardial infarction and coronary arterial thrombosis, renal diseases
CC   such as diabetic nephropathy, muscular diseases such as hypertrophy,
CC   immune disorders such as immune complex nephritis, multiple sclerosis,
CC   cancer, sarcoidosis, nonarcoidotic pulmonary granulomatous diseases such
CC   as asbestosis and vascular pathologies involving an endothelial
CC   abnormality such as deep vein thrombosis.
XX
SQ   Sequence   1249 AA;

  Query Match             31.1%;  Score 1334;  DB 22;  Length 1249;
  Best Local Similarity   42.6%;  Pred. No. 6.7e-104;
  Matches  255;  Conservative  112;  Mismatches  213;  Indels   18;  Gaps    7;

Qy      20 TIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQNMNNAGDKWSAFLKEQSTL 79
           | | :|  |:::::  |: |  : : |:| |||||| |  : :     : |    :  |
Db     649 TDEAKADRFVEEYDRTAQVLLNEYAEANWQYNTNITIEGSKILLEKSTEVSNHTLKYGTR 708

Qy      80 AQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILNTMSTIYSTGKVCNPDNPQ 139
           |: : :   || ::|  :: ||    :||   : :  | ||  | | ||   :|  :
Db     709 AKTFDVSNFQNSSIKRIIKKLQNLDRAVLPPKELEEYNQILLDMETTYSLSNICYTNG-- 766

Qy     140 ECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYEEYVVLKNEMARANHYEDY 199
            |: ||| |  :|| |  | | |||:||| :||: : | : :||   |::|: | | |
Db     767 TCMPLEPDLTNMMATSRKYEELLWAWKSWRDKVGRAILPFFPKYVEFSNKIAKLNGYTDA 826

Qy     200 GDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLHAYVRAKLMNAYPS-YISP 258
           || ||  || : ::          :|:|  ::|::||| :|||||  |   | | ||:
Db     827 GDSWRSLYESDNLE----------QDLEKLYQELQPLYLNLHAYVRRSLHRHYGSEYINL 876

Qy     259 IGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQAWDAQRIFKEAEKFFVSV 318
            | :||||||:|| : |:|:| |  ||   |||| |:||: | |  :||||||: || |:
Db     877 DGPIPAHLLGNMWAQTWSNIYDLVAPFPSAPNIDATEAMIKQGWTPRRIFKEADNFFTSL 936

Qy     319 GLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKG-DFRILMCTKVTMDDFLTAHHEMG 377
           ||  :   ||  |||  | : :: ||||:|||   | ||||  || | |:| : ||||||
Db     937 GLLPVPPEFWNKSMLEKPTDGREVVCHPSAWDFYNGKDFRIKQCTSVNMEDLVIAHHEMG 996

Qy     378 HIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSIGLLSPDFQEDNETEIN 437
           |||| | |   |   | ||| ||||||:|:||:|| :||||| |: ||| :     | :||
Db     997 HIQYFMQYKDLPVTFREGANPGFHEAIGDIMALSVSTPKHLYSLNLLSTE-GSGYEYDIN 1055

Qy     438 FLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEMKREIVGVVEPVPHDETY 497
           ||:| ||  :  :||:|::::||| || | | |: : ::|| :: :  |:  |||  :
Db    1056 FLMKMALDKIAFIPFSYLIDQWRWRVFDGSITKENYNQEWWSLRLKYQGLCPPVPRSQGD 1115

Qy     498 CDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLHKCDISNSTEAGQKLFNM 557
            || | |||  :  ::||:   : |||| ||||:|| | |||||||  | |||: | :
Db    1116 FDPGSKFHVPANVPYVRYFVSFIIQFQFHEALCRAAGHTGPLHKCDIYQSKEAGKLLADA 1175

Qy     558 LRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK--NSFVGW-STDWSP 612
           ::|| |:||  |:: : |  ||:   ::|||:|| ||  :|:     :||   :|:|
Db    1176 MKLGYSKPWPEAMKLITGQPNMSASAMMNYFKPLTEWLVTENRRHGETLGWPEYNWAP 1233


RESULT 15
AAU02985
ID   AAU02985 standard; Protein; 1252 AA.
XX
AC   AAU02985;
XX
DT   12-SEP-2001  (first entry)
XX
DE   Angiotensin converting enzyme (ACEV) splice variant protein #85.
XX
KW   Angiotensin converting enzyme splice variant; ACEV; interleukin 6;
KW   granulocyte colony stimulating factor receptor; glucagon; hypertrophy;
KW   platelet-derived endothelial cell growth factor; cardiovascular disease;
KW   cellular tumour antigen P53; cyclin-dependent kinase inhibitor 1C;
KW   vasoactive intestinal polypeptide receptor 2; arteriosclerosis; cancer;
KW   myocardial infarction; coronary arterial thrombosis; renal disease;
KW   diabetic nephropathy; muscular disease; immune disorder; sarcoidosis;
KW   multiple sclerosis; immune complex nephritis; deep vein thrombosis;
KW   nonarcoidotic pulmonary granulomatous disease; endothelial abnormality;
KW   vascular disorder; asbestosis.
XX
OS   Mus sp..
XX
PN   WO200136632-A2.
XX
PD   25-MAY-2001.
XX
PF   17-NOV-2000; 2000WO-IL00766.
XX
PR   17-NOV-1999;   99IL-0132978.
PR   10-DEC-1999;   99IL-0133455.
XX
PA   (COMP-) COMPUGEN LTD.
XX
PI   Levine Z,  David A,  Azar I,  Khosravi R,  Bernstein J;
XX
DR   WPI; 2001-336004/35.
DR   N-PSDB; AAS06085.
XX
PT   Novel alternative splicing variants e.g. variant of angiotensin
PT   converting enzyme (ACEV), useful in identifying candidate compounds
PT   capable of binding to the variant and to detect anti-variant antibodies
PT   -
XX
PS   Claim 4; Fig 85; 519pp; English.
XX
CC   The sequence represents an angiotensin converting enzyme splice variant
CC   (ACEV) polypeptide. The polypeptides of the invention include variants of
CC   granulocyte colony stimulating factor receptor, glucagon, interleukin 6,
CC   platelet-derived endothelial cell growth factor, cyclin-dependent kinase
CC   inhibitor 1C, cellular tumour antigen P53, and vasoactive intestinal
CC   polypeptide receptor 2. The polypeptides and their associated nucleic
CC   acids are useful for identification of variant sequences and detection of
CC   candidate compounds capable of binding the molecules. The sequences of
CC   the invention can be used in the treatment and diagnosis of various
CC   disorders including cardiovascular diseases such as arteriosclerosis,
CC   myocardial infarction and coronary arterial thrombosis, renal diseases
CC   such as diabetic nephropathy, muscular diseases such as hypertrophy,
CC   immune disorders such as immune complex nephritis, multiple sclerosis,
CC   cancer, sarcoidosis, nonarcoidotic pulmonary granulomatous diseases such
CC   as asbestosis and vascular pathologies involving an endothelial
CC   abnormality such as deep vein thrombosis.
XX
SQ   Sequence   1252 AA;

  Query Match             31.1%;  Score 1334;  DB 22;  Length 1252;
  Best Local Similarity   42.6%;  Pred. No. 6.7e-104;
  Matches  255;  Conservative  112;  Mismatches  213;  Indels   18;  Gaps    7;

Qy      20 TIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQNMNNAGDKWSAFLKEQSTL 79
           | | :|  |:::::  |: |  : : |:| |||||| |  : :     : |    :  |
Db     649 TDEAKADRFVEEYDRTAQVLLNEYAEANWQYNTNITIEGSKILLEKSTEVSNHTLKYGTR 708

Qy      80 AQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILNTMSTIYSTGKVCNPDNPQ 139
           |: : :   || ::|  :: ||    :||   : :  | ||  | | ||   :|  :
Db     709 AKTFDVSNFQNSSIKRIIKKLQNLDRAVLPPKELEEYNQILLDMETTYSLSNICYTNG-- 766

Qy     140 ECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYEEYVVLKNEMARANHYEDY 199
            |: ||| |  :|| |  | | |||:||| :||: : | : :||   |::|: | | |
Db     767 TCMPLEPDLTNMMATSRKYEELLWAWKSWRDKVGRAILPFFPKYVEFSNKIAKLNGYTDA 826
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Qy     200 GDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLHAYVRAKLMNAYPS-YISP 258
           || ||  || : ::          :|:|  ::|::||| :|||||  |   | | ||:
Db     827 GDSWRSLYESDNLE----------QDLEKLYQELQPLYLNLHAYVRRSLHRHYGSEYINL 876

Qy     259 IGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQAWDAQRIFKEAEKFFVSV 318
            | :||||||:|| : |:|:| |  ||   |||| |:||: | |  :||||||: || |:
Db     877 DGPIPAHLLGNMWAQTWSNIYDLVAPFPSAPNIDATEAMIKQGWTPRRIFKEADNFFTSL 936

Qy     319 GLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKG-DFRILMCTKVTMDDFLTAHHEMG 377
           ||  :   ||  ||| | : :: ||||:|||   | ||||  || | |:| : ||||||
Db     937 GLLPVPPEFWNKSMLEKPTDGREVVCHPSAWDFYNGKDFRIKQCTSVNMEDLVIAHHEMG 996

Qy     378 HIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSIGLLSPDFQEDNETEIN 437
           |||| | |   |   | ||| |||||:|:||:|| :||||| |: ||| :     | :||
Db     997 HIQYFMQYKDLPVTFREGANPGFHEAIGDIMALSVSTPKHLYSLNLLSTE-GSGYEYDIN 1055

Qy     438 FLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEMKREIVGVVEPVPHDETY 497
           ||:| ||  :  :||:|:::::||| || | | |: : ::|| :: :  |:  |||  :
Db    1056 FLMKMALDKIAFIPFSYLIDQWRWRVFDGSITKENYNQEWWSLRLKYQGLCPPVPRSQGD 1115

Qy     498 CDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLHKCDISNSTEAGQKLFNM 557
            || | |||  :  ::||:   : |||| ||||:|| | ||||||||  | |||: | :
Db    1116 FDPGSKFHVPANVPYVRYFVSFIIQFQFHEALCRAAGHTGPLHKCDIYQSKEAGKLLADA 1175

Qy     558 LRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNK--NSFVGW-STDWSP 612
           ::|| |:||  |:: : |  ||:   ::|||:||  ||  :|:     :||   :|:|
Db    1176 MKLGYSKPWPEAMKLITGQPNMSASAMMNYFKPLTEWLVTENRRHGETLGWPEYNWAP 1233
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Search completed: October 9, 2002, 17:52:52
Job time : 66 secs